

1. A graphical code reader, comprising:
 - an infrared light-emitting diode;
 - a red light-emitting diode;
 - an image sensor;
 - a lens positioned to focus reflected light on the image sensor;
 - a processor;
 - memory in electronic communication with the processor; and
 - instructions stored in the memory, the instructions being executable by the processor to implement a method comprising:
 - illuminating the infrared light-emitting diode at an infrared illumination intensity level;
 - illuminating the red light-emitting diode at a red illumination intensity level;
 - capturing a digital image for processing, the digital image being an electronic representation of an optical image formed on the image sensor; and
 - processing the digital image to attempt to decode a graphical code within the digital image.
2. The graphical code reader of claim 1, wherein the method further comprises:
 - detecting user input;
 - obtaining illumination information from the user input;
 - setting the infrared illumination intensity level in accordance with the illumination information; and
 - setting the red illumination intensity level in accordance with the illumination information.
3. The graphical code reader of claim 1, wherein the method further comprises:
 - determining a brightness of the digital image;
 - determining a desired brightness of the digital image;

determining a difference signal which indicates a difference between the brightness of the image and the desired brightness of the digital image;
adjusting the infrared illumination intensity level in proportion to the difference signal;
and
adjusting the red illumination intensity level in proportion to the difference signal.

4. The graphical code reader of claim 1, wherein the infrared light-emitting diode emits infrared light having a wavelength band that is substantially centered at 700 nanometers.
5. The graphical code reader of claim 1, wherein the infrared light-emitting diode emits infrared light having a wavelength band that is substantially centered at 735 nanometers.
6. The graphical code reader of claim 1, wherein the red light-emitting diode emits infrared light having a wavelength band that is substantially centered at 660 nanometers.
7. A graphical code reader, comprising:
 - an infrared light-emitting diode;
 - a red light-emitting diode;
 - a near field that includes a near-field image sensor region and a near-field lens positioned to focus first reflected light on the near-field image sensor region;
 - a far field that includes a far-field image sensor region and a far-field lens positioned to focus second reflected light on the far-field image sensor region, and wherein a first distance between the near-field lens and the near-field image sensor region is greater than a second distance between the far-field lens and the far-field image sensor region;
 - a processor;
 - memory in electronic communication with the processor; and
 - instructions stored in the memory, the instructions being executable by the processor to implement a method comprising:

illuminating the infrared light-emitting diode at an infrared illumination intensity level;
illuminating the red light-emitting diode at a red illumination intensity level;
obtaining a digital image, the digital image being an electronic representation of an optical image formed on at least one of the near-field image sensor region and the far-field image sensor region; and
processing the digital image to attempt to decode a graphical code within the digital image.

8. The graphical code reader of claim 7, wherein the method further comprises:
determining which of the near field and the far field is being used to read the graphical code; and
reducing the infrared illumination intensity level below the red illumination intensity level if the near field is being used to read the graphical code.
9. The graphical code reader of claim 7, wherein the method further comprises:
determining which of the near field and the far field is being used to read the graphical code; and
increasing the infrared illumination intensity level if the far field is being used to read the graphical code.
10. In a graphical code reader, a method comprising:
illuminating an infrared light-emitting diode at an infrared illumination intensity level;
illuminating a red light-emitting diode at a red illumination intensity level;
capturing a digital image for processing, the digital image being an electronic representation of an optical image formed on an image sensor; and
processing the digital image to attempt to decode a graphical code within the digital image.
11. The method of claim 10, further comprising:

- detecting user input;
 - obtaining illumination information from the user input;
 - setting the infrared illumination intensity level in accordance with the illumination information; and
 - setting the red illumination intensity level in accordance with the illumination information.
12. The method of claim 10, further comprising:
- determining a brightness of the digital image;
 - determining a desired brightness of the digital image;
 - determining a difference signal which indicates a difference between the brightness of the image and the desired brightness of the digital image;
 - adjusting the infrared illumination intensity level in proportion to the difference signal;
 - and
 - adjusting the red illumination intensity level in proportion to the difference signal.
13. The method of claim 10, wherein the infrared light-emitting diode emits infrared light having a wavelength band that is substantially centered at 700 nanometers.
14. The method of claim 10, wherein the infrared light-emitting diode emits infrared light having a wavelength band that is substantially centered at 735 nanometers.
15. The method of claim 10, wherein the red light-emitting diode emits infrared light having a wavelength band that is substantially centered at 660 nanometers.
16. In a graphical code reader comprising a near field and a far field, the near field including a near-field image sensor region and a near-field lens positioned to focus first reflected light on the near-field image sensor region, and the far field including a far-field image sensor region and a far-field lens positioned to focus second reflected light on the far-field image sensor region, a method comprising:

illuminating an infrared light-emitting diode at an infrared illumination intensity level;
illuminating a red light-emitting diode at a red illumination intensity level;
obtaining a digital image, the digital image being an electronic representation of an
optical image formed on at least one of the near-field image sensor region and the
far-field image sensor region; and
processing the digital image to attempt to decode a graphical code within the digital
image, wherein a first distance between the near-field lens and the near-field
image sensor region is greater than a second distance between the far-field lens
and the far-field image sensor region.

17. The method of claim 16, further comprising:
determining which of the near field and the far field is being used to read the graphical
code; and
reducing the infrared illumination intensity level below the red illumination intensity
level if the near field is being used to read the graphical code.
18. The method of claim 16, further comprising:
determining which of the near field and the far field is being used to read the graphical
code; and
increasing the infrared illumination intensity level if the far field is being used to read the
graphical code.